Pest Update (July 29, 2009)

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Plant development (Phenology) for the growing season

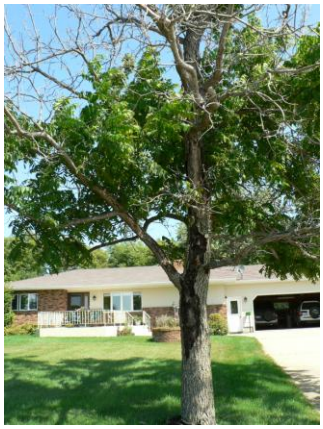
The Amur maackias are in bloom in Brookings; we are still at normal development for the year (but wetter than normal at least in Brookings).

E-samples

The sample of the week has to be the Tatarian honeysuckle (*Lonicera tatarica*)! I received numerous e-samples and mailed sample this week regarding this plant. The two questions; what is it and can I eat the berries? The plant is the Tatarian honeysuckle and can be easily identified by its opposite, ovate leaves that have a slight bluish-green color. The fruit is an orange-red berry, usually found in clusters of two's, and occur at the axils of the leaves rather than on the terminal of the shoots. The plant, a native of Central Asia, was widely planted as a tough windbreak shrub and has become even more widely disseminated by the birds as they carry the seeds. The shrub has lost its value as a windbreak plant due to the introduction of the honeysuckle aphid in the early 1980s. This insect is responsible for the witches-brooming common seen on the tips of affected shrubs. The fruit is widely regarded as poisonous to humans, though there is not much documentation regarding this fact. Vomiting and abdominal pains are often given as the symptoms following eating the fruit. Europe is where most of the information on toxicity comes from, but no sense tempting fate and I would suggest avoid eating this fruit fresh or in jams or jellies. Interestingly, one paper from the United States points out a study where the fruit was found to be poisonous to rabbits so it's not all bad news

This is also the time that the two most common diseases of apple, apple scab and cedar-apple rust, express their symptoms. Apple scab typically produces olive-drab blotches on the leaves (left picture) while cedar-apple rust (picture below) results in bright circular patches on the leaf. While these diseases are not fatal to a tree, the infection does result in discolored leaves and often premature defoliation. Occasionally these diseases can also infect the fruit and even twigs. While the symptoms appear in mid-summer, these diseases infect the plants in the spring as the leaves are coming out. The time to control these diseases is then, not now.

Venturia leaf and shoot blight is also appearing across the state. There are a number of different species of this Venturia that colonize *Populus* but the two most common are *V. macularis* (Syn. *V tremulae*) that attacks quaking aspen in our state and *V. populina* that attacks cottonwoods. At this time of year I usually receive samples of both pathogens as the symptoms – dark gray to black blotches on the leaves and the adjacent twig also blackened and often curled – are very noticeable. These diseases are usually twig and branch killers as the disease often stops as the junction between branches. The only control is to prune out affected shoots and branches and rake up and dispose of any fallen leaves.



Declining walnut are common across the state. The recent concern regarding the thousand canker disease has increased our awareness of walnut and giving any dying walnut a closer look. The thousand canker and its vector the walnut twig beetle are responsible for the loss of thousands of black walnut throughout the west. An examination of several declining walnut in the southeastern part of our state did not reveal any signs of either the canker or the beetle but did find some interesting common symptoms. All the walnuts appeared healthy two or three years ago and produced an abundant crop of walnuts. The next spring some dieback

was noticed and the trees continued to die back the following year. A close inspection of these trees found that the bark was killed on the south side of these trees from the base to about 20 or 30 feet up. Also the lower scaffold limbs had the bark killed on the south side. Only branches on the north sides of the trees appeared normal, though these may have some dieback as well. It is a mystery why this pattern of dieback occurred on trees in a number of communities but I suspect freeze injury that happened several years ago. The trees have already started producing callus tissue along the edge of the wounds and appear to be recovering. There is the possibility that the thousand canker disease is present in the state since it is found from California to Colorado and I will continue to examine declining walnuts for this problem.

Samples received

Butte County (extension) **What is wrong with this spruce from Belle Fourche?**

This is a Black Hills spruce and the problem is spruce spider mite. These mites have been numerous this year with many trees exhibiting symptoms of an infestation; bronzing needles, loss of older needles, and fine webbing. The control time is not now but this fall about the time maples leaves are coloring.

Charles Mix County (extension) **What is this plant?**

This is the Tatarian honeysuckle – see under e-samples for more information on this plant.

Clark County (extension) **What is this shrub and is it edible?**

This is the Tatarian honeysuckle – see under e-samples for more information on this plant

Clay County (extension) **What is the problem with Jerry's aspen tree?**

This is venturia shoot and leaf blight. Please see under e-samples for more information on this disease.

Davison County (extension) **What is wrong with this dwarf spruce? The branches are dying and the tips of the new growth are curled.**

This is not spruce spider mites, a common problem in these densely branched dwarf spruces, but winter injury. These small trees are not reliably winter-hardy in the state and while some survive many year, hard winters, such as last winter, caused many of these dwarf trees to dleback or die entirely.

Gregory County (conservation district) **Please identify this willow.**

This appears to be the yellow willow (*Salix lutea*, syn *S. rigida*). Willow taxonomy is very complex and willows frequently hybridize so the identification is difficult to the species but this sample appears to be the yellow willow. This is a shrub willow that is native to the state and is used as a windbreak species.

Hyde County (conservation district) **What is the problem with Jerry's Amur maple trees? Is this chlorosis? I thought they were alkaline tolerant.**

Yes, this is chlorosis due to the alkaline soils restricting the availability of iron. Amur maple is considered by many to be a subspecies of the Tatarian maples so is given the scientific name of *Acer tataricum* spp *ginnala*. The Tatarian maple, while similar in appearance to the Amur maple, is a superior tree. It is alkaline tolerant (at least up to a pH of 7.5), the Amur maple is not and often becomes chlorotic on soils with a pH of 7.2. I would recommend using the Tatarian maple for windbreak plantings; it is more tolerant of alkaline soils and hardier. Chlorosis is difficult to manage in a windbreak setting as the management requires annual applications of a chelated iron.

Jackson County (conversation district) **What kind of a cherry is this? It is growing just west of Kadoka.**

This is the sour cherry (*Prunus cerasus*) also known as pie cherry. These are surprisingly hardy trees adapted to the West River environment. I have seen a number of these trees on ranches in the Wall area and they all were doing fine and producing a good crop of cherries.

Moody County (extension) **What is causing the discoloration on the willow leaves?**

This is willow scab, another Venturia fungus, that causes the discoloration of the leaves that eventually results in the affected leaves blackening and wilting. The disease is often associated with black canker, a pathogen that causes the branches to dieback. The only control is to prune out dead and dying branches and rake up and dispose of the fallen leaves, quite an undertaking and most folks just live with a diseased tree that continues to drop leaves and twigs rather than attempt to control the disease.

Perkins County (extension) **What is causing these blotches to appear on the cottonwood leaves?**

This is venturia shoot and leaf blight. Please see the information under e-samples to learn more about this disease.

Sully County (extension) **What is wrong with Rebecca's elm?**

This is the Siberian elm (*Ulmus pumila*), commonly, though incorrectly called the Chinese elm by many in the state. Siberian elms are messy trees, often dropping twigs or branches. The most noticeable symptom on the sample was leaf curling and distortion, and these symptoms are often associated with herbicide injury. The trees are very sensitive to phenoxy herbicides such as 2,4-D and if these are used anywhere near the trees, the trees will have curled leaves and often some dieback and decline.

Sully County (extension) **What are these bumps along the veins of the oak leaf?**

This is the oak veinpocket gall caused by a small midge. The galls will not harm the tree nor is there an effective control for them.

Sully County (extension) **What is causing the leaves on this American elm to become blacken and sticky?**

This is the woolly elm aphid. This insect creates cottony masses on twigs and leaves and the honeydew excreted by the insects causes the leaves to become sticky. This honeydew is often colonized by sooty mold so the tissue also becomes blackened. The best control is a soil drench of imidacloprid, such as Bayer Advanced Tree and Shrub Insect Control, applied in October. This will control the insect the following summer.

Tripp County (extension) **What is this plant and are the berries edible?**

This is the Tatarian honeysuckle – see under e-samples for more information on this plant.

Turner County (extension) **What is causing the rapid decline of this mature Black Hills spruce? Interestingly enough, the adjacent Colorado blue spruce looks fine.**

Black Hills spruce suffers far fewer problems that Colorado blue spruce so this is an unusual occurrence. The new growth on the plant is normal, both in needle length and shoot growth. The previous year's shoot growth also appears normal but all these needles are missing. Generally the loss of the older needles, particularly when it occurs somewhat rapidly, is associated with some environmental stressor, excessive soil moisture, cold winter weather, winter winds, and is not related to an insect or pathogen. My guess is the stressor was the cold weather we experienced last winter.

Turner County (conservation district) **What are these galls on the oak?**

This is the hedgehog gall cause by a small wasp. There is no control for this interesting creature nor does it harm the tree other than its appearance.

Yankton County (extension) **What is the problem with Dan's spruce tree?**

There may be more than what was on the sample – spruces often have several problems rather than just one. However, the only problem on the sample was spruce spider mites, a fairly heavy infestation. Remember the control time for this mite is not now, but this fall as maples begin to color.

Yankton County (extension) **What is wrong with these tall cedars on Don's place?**

Impossible to tell from the sample as the twigs were just of the tips. You mentioned canker on the sheet and while this may be a possibility, it is not possible to identify the causal agents from this sample.

Yankton County (extension) **What is wrong with Don's juniper?**

The dead tips did not have any signs of phomopsis and herbicide may be the stressor that caused the shoot tips to yellow and die. If the other plants in the landscape are showing symptoms of herbicide injury, as noted in the letter accompanying the sample, then this is a strong possibility for the juniper base on the symptoms.

Yankton County (extension) **Does Dale's spruce have needlecast disease?**

Yes. I have not received many samples of rhizosphaera this year or any of the Stigmina needlecast that has similar symptoms. Rhizosphaera needlecast can be controlled by two applications of a fungicide containing chlorothalonil, one applied when the new growth is just expanding and the second about three weeks later.

Yankton County (extension) **Please identify Delloano's shrub**.

This is sand cherry (*Prunus pumila*).